

crystal

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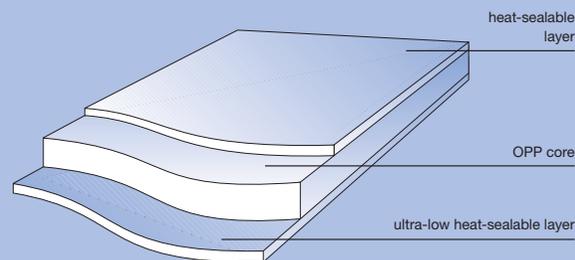
## HLD

- Transparent co-extruded OPP film
- Two-side heat-sealable, one-side ultra-low sealing threshold
- Excellent hot tack



## TREOFAN PACKAGING FILM HLD

Transparent OPP film designed to meet the needs of ultra high-speed packaging machines



Treofan HLD is a biaxially oriented, co-extruded polypropylene film. Due to its ultra-low heat-seal threshold (below 80 °C), very high processing can be achieved. The film is corona-treated on one side to improve adhesion during printing and lamination. It has tailored and controlled slip properties to further enhance its high-speed running capabilities.

## PRODUCT FEATURES

### Physical characteristics:

- high resistance to tear and puncture
- excellent resistance to low temperatures
- dimensionally stable under conditions of varying humidity
- high heat-seal strength

### Film characteristics:

- low water vapour permeability
- water-repellent
- resistance to biological oil and biological grease
- odourless and taste-free
- physiologically harmless, thus suitable for food packaging

### Optical characteristics:

- transparent
- low haze
- excellent gloss

### Special properties:

- ultra-low heat-sealing layer
- printable
- good anti-static properties

## APPLICATIONS AND PROCESSING

Treofan HLD can be used for packaging various types of products which need to be protected against moisture or dehydration. Also for packages subject to high mechanical stress such as deep-freeze packs.

### Printing:

- flexographic and rotogravure printing (half-tone and line)

### Laminating:

- adhesive or extrusion lamination with OPP or with other substrates, depending on application

### Packaging:

- as a result of its low sealing surface Treofan HLD can be used on ultra high-speed HFFS machines

### Storage:

- place Treofan HLD in the processing area approximately 24 hours prior to processing

Certified according to

## DIN EN ISO 9001:2000

Compliance with industrial health and safety standards:  
Treofan OPP films do not present any significant danger to health and safety in the workplace, provided they are used for the intended purpose in accordance with conventional practices and that health and safety regulations are observed. Relevant guidelines can be found in our safety information.

## TECHNICAL DATA (typical values)

Properties	HLD 20	HLD 25	HLD 30	HLD 50	HLD 57	Unit	Measuring method
Nominal thickness	20	25	30	50	57	µm	–
Unit weight	18.2	22.8	27.3	45.5	51.9	g/m <sup>2</sup>	ISO 4591
Density	0.91	0.91	0.91	0.91	0.91	g/cm <sup>3</sup>	–
Yield	54.9	44.0	36.6	22.0	19.3	m <sup>2</sup> /kg	–
Heat-seal strength	1.5	1.6	1.6	1.6	1.6	N/15 mm	Treofan
Low heat-seal threshold layer	80	80	80	80	80	°C	Treofan
Coefficient of friction (film/film)	0.35	0.35	0.35	0.35	0.35	–	ISO 8295
Wettability	36–39	36–39	36–39	36–39	36–39	mN/m	ISO 8296
Haze	2.0	2.0	2.1	2.4	2.5	%	ASTM D 1003
Gloss	70	70	70	70	70	%	DIN EN ISO 2813
Tensile strength: machine direction transverse direction	120 270	120 270	120 270	120 270	120 270	N/mm <sup>2</sup> N/mm <sup>2</sup>	DIN EN ISO 527-1/-3 DIN EN ISO 527-1/-3
Elongation at break: machine direction transverse direction	190 50	190 50	190 50	190 50	190 50	% %	DIN EN ISO 527-1/-3 DIN EN ISO 527-1/-3
Water vapour permeability: 23°C/85% rh 38°C/90% rh	1.3 6.0	1.0 4.4	0.9 3.9	0.6 2.3	0.5 2.0	g/m <sup>2</sup> ·d ±10%	ASTM F 1249 ASTM F 1249

## AVAILABILITY (unprinted film)

Reel length (m):

Packaging film	Standard length	Up to 6-times standard
HLD 20	3,800	22,800
HLD 25	3,000	18,000
HLD 30	2,500	15,000
HLD 50	1,500	9,000
HLD 57	1,350	8,100

8-times standard or other reel lengths available on request

Maximum reel outside diameter (mm):

Core diameter	Standard length	Up to 6-times standard
77 mm	approx. 330	–
152 mm	approx. 360	approx. 800

Max. reel width: 2,000 mm (widths > 2,000 mm on request)

Tests have shown that under the prescribed storage conditions the characteristics of Treofan HLD will maintain consistent performance and will be best before use throughout a 6-months period after delivery. Treofan HLD is largely unaffected by climatic influences, but should not be stored at temperatures above 30°C (86°F). The rolls should be kept in their original wrapping until used. After the rolls have been unwrapped, they should be stored safely in horizontal position.

## Food Safety

Treofan HLD has been developed specially for packaging foods and meets the specific requirements on health and safety. It meets the FDA and EC regulations, which includes the specific “German Food and Commodity Act” and the current recommendations of the BfR. Compliance with other specific national regulations is available on request.

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